

ABSTRACT OF THE DISCLOSURE

A photovoltaic element, a light shielding portion, a planarized layer, a color filter, another planarized layer and an undercoat layer are formed successively on a semiconductor substrate, followed by forming resin lenses. The undercoat layer positioned between adjacent resin lenses is subjected to an etching treatment with the resin lenses used as a resist mask so as to form ditches extending in the X- and Y- directions and other ditches extending in the XY- direction. Further, a transparent resin layer having a predetermined thickness is formed to cover the resin lenses and the ditches, thereby obtaining a solid image-pickup device comprising a micro lens array including a plurality of micro lenses.